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OVARITIS.

Extract from Lectures delivered in 1869 at the Hôpital de la Pitié, in Paris, by DR. T. GALLARD.
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THE important physiological functions of the ovary are to-day so well known, that no one hesitates to consider that organ as the essential part, the actual centre of the female generative system. All the diseases which can attack that organ, must exercise therefore a great influence, not only on the uterus and its appendages, but also on the whole organism. Nevertheless the diseases of the ovaries are, perhaps, less studied, and certainly less understood, than all the others which come under our observation.

In chronic ovarian diseases, it is the history of their beginnings which is so little known, for we cannot always, in studying them, trace them back to their origin, and thus state with precision the phenomena which accompanied their first appearance. In many cases, it is true, we can ask whether they are not the result of a primary acute stage, and especially of a stage of inflammation. Now an acute inflammation of the ovary, or ovaritis, is to many pathologists a myth which they have not observed, and of which they have given the description either from their own ideas of what it should be, or else have adopted unchanged that which others have written on the same subject.

This explains to you why, instead of the clear and distinct records, which your readings leave in your mind when they relate to a point of science which has been clearly elucidated, you only find uncertainty and confusion, if you attempt to recall what you have read on the subject of inflammation of the ovary.

The cause of this confusion and uncertainty is two-fold. First, the almost universal habit of embracing in one description those inflammatory diseases which follow delivery with those which occur as the result of the presence of some form of "*puerperal fever*." It is true there is inflammation in both cases, but, clinically speaking, there is the same difference between the metritis or ovaritis of puerperal fever, on the one hand, and simple metritis or ovaritis, on the other, as there is between erysipelatous inflammations or traumatic erysipelas which occurs in surgical wards, under certain epidemic influences, and the slight and mild erysipelas, such, for example, as of the face, so often seen in the practice of medicine. This is a radical difference, and it should cause us to describe separately, as two perfectly distinct diseases, these two affections which have neither the same origin, progress, symptoms, nor usual termination.

The second cause of our uncertainty and doubt concerning the history of diseases of the ovary, is owing to the fact that these diseases are so closely connected with those of neighboring organs that it is not only very difficult in a clinic to distinguish them apart, but practically we shall find them as a rule co-existing in the same patient.

Since inflammation of the Fallopian tube almost necessarily accompanies, in the great majority of cases, the inflammation of the ovary, and since the latter is almost an inevitable complication of peri-uterine inflammation or circumscribed pelvic peritonitis, it follows that before the time when these peri-uterine inflammations were recognized and described, all those diseases which were observed were considered as having sprung from the ovaries, while, by a sort of mutual exchange, many cases of ovaritis, observed since then, have been described among cases of pelvic peritonitis or peri-uterine inflammations.

These peri-uterine inflammations are in many cases composed of inflammations of the peri-uterine cellular tissue, of the pelvic peritoneum, of the ovary, of the Fallopian tube, indeed, even in certain cases, of the uterus itself, without our being able to state absolutely which tissue was first affected, or which is the most inflamed.

However, besides these complex cases, there are many more simple, in which the inflammation is limited to only one of the parts I have just enumerated. After a careful analysis of many cases which have passed under my notice during the last fourteen years, I think I need no longer hesitate to separate ovaritis from other peri-uterine inflammations in those cases, comparatively rare, where it occurs isolated and uncomplicated.

As an example of this disease, allow me to call your attention to a patient at present in the hospital.

This woman, thirty-two years of age, and of an apparently vigorous constitution, although we have found in the lungs some well-marked signs of tuberculosis, complains of a tolerably severe pain in the abdomen, especially in the left iliac region. Turning our attention to that spot, we see in the first place that the general outline of the abdomen is unaltered; there is neither swelling nor distention. The coils of the intestines are not to be felt under the skin. The skin is not hot. The abdomen is flaccid, and palpation, exercised carefully, does not cause the patient to complain of pain. In order to render the examination painful, it is necessary to use considerable pressure, so that the fingers may penetrate deeply into the pelvic cavity. This manœuvre, although it discovers no tumor, yet causes pretty acute pain at a point a little anterior to the centre of an oblique line drawn from the anterior superior spine of the ilium to the symphysis pubis. At that point, and just where the pain is located, we feel a certain degree of resistance to the finger, but *there is no distinct tumor*. Observe in passing that it cannot be a neuralgic pain, for it is too deeply seated for that, and, besides, a careful examination shows the absence of the tender spots so characteristic of abdominal neuralgia.

Do we obtain any further information by a vaginal examination? The vagina is moderately warm, without dryness, and free from any profuse discharge. The cervix is directed forwards, partially open, disclosing a transverse slit, as is the case with all women who have borne children. It is flexible, soft to the touch, and presents no superficial alteration. The body of the uterus is slightly retroverted. The vaginal cul-de-sacs are soft and yielding, with the exception of that on the left side. There the finger, passed in to a considerable distance and a little backwards, reaches a small tumor, which easily glides away, and which is exquisitely tender to the slightest touch. This little tumor, apparently about the size of an almond, flies so easily from under the finger that it is impossible to determine either its size or outline. If, however, we combine abdominal palpation with the vaginal examination, we shall succeed in fixing it more firmly by resting it on the exploring finger, which then ascertains that it is smooth, round, or rather oval; that it is in some way attached and parallel to the long axis of the uterus. Finally, the rectal exploration comes to complete our information. This is done by grasping the tumor between two fingers introduced, the one in the vagina the other in the rectum, and we then feel that it still eludes the grasp—like some round, slippery body, a cherry-stone or marble, for instance, and this exploration causes at its highest point that exquisitely sensitive pain which calls forth at each new touch a cry from the patient, and which well deserves the qualification of exquisite (*la qualification d'exquise*). Arterial pulsation can be detected neither in the tumor nor its neighborhood.

It is a question, in the first place, whether we have to do with a simple neuralgia; and observe in this connection that the absence of all tender spots has at once eliminated this explanation, which was moreover at once set aside when we placed our finger on such a morbid lesion as a tumor. Again, the pain is not caused by deep pressure, and if there was reason to think it was due to inflammation, it is not a case of peritonitis, for in that disease the pain becomes acute on the slightest pressure, and does not allow of a deep exploration, such as we have been able to exercise in this case. Is it a case of inflammation of the uterus or of the peri-uterine tissue? In regard to the former, we know that the pain in metritis is lancinating, deep-seated, increased by pressure on the diseased organ, and, furthermore, that it is situated in the median line. In this case the pain is lateral, uninfluenced by pressure exercised on the uterus or by movements of that organ, unless indeed we try to rest the body of the uterus on the tumor, which is situated along its left border.

There yet remains to be considered peri-uterine inflammations. It is true that certain observers have believed it possible to find a slight aid for a differential diagnosis in the exquisite pain which they believe to be peculiar to this disease. Apart from this pain, however, there are other symptoms which may cause us to lay aside the

idea of peri-uterine inflammation. In that disease there is more heat of the vagina, more swelling of the tissues, which present, although hard and resisting, a sort of œdematous appearance. The tumor is fixed, so that it not only remains under the finger adherent to the neighboring tissues, but also causes them to adhere to each other, so that the uterus instead of being, as is usual, moveable, becomes encased as it were between the inflamed tissues; finally, the tumor projects into the vagina, becoming prominent either through the entire length of the os tincæ or towards one cul-de-sac, which it obliterates, presenting then at its surface arterial pulsation.

There now only remain two organs in which we can locate the inflammation—the Fallopian tubes, and the ovaries. The symptoms which we have thus far described, are insufficient to enable us to say whether we have to deal with ovaritis rather than with salpingitis, or even with that which is much more common, namely, a salpingito-ovaritis, a name applied to an inflammation appearing simultaneously in both organs. This question, which, even after a physical examination, remains unsettled, will perhaps be at once determined when we have taken into account the functional derangements of which I have thus far purposely avoided all mention.

The patient is, as I have said, thirty-two years of age, or in other words, in the full activity of the generative organs. She has four times been pregnant. These pregnancies have all terminated regularly at full term, and the last one was finished about five years ago, without any resulting accident. The catamenia first appeared when she was thirteen years of age, and have always since been regular, with the exception of some slight irregularity some years since, following the death of one of her children. At that time there was a premature arrest of menstruation, but no further trouble, and the next month the catamenia returned as usual. I would add that menstruation was never painful, and that, during the intervals, leucorrhœa never, as a rule, existed. It was at the close of November that we find the beginning of the disease from which she is now suffering. The catamenia appeared as usual on the 20th of November, but, instead of lasting as usual five days, the discharge continued for nine, leaving behind a malaise, fatigue, a feeling of exhaustion, swelling of the abdomen, anorexia, and constant pain in the lumbar region. This condition lasted a few days, at the end of which an actual metrorrhagia ensued. This made its appearance on the fifth of December, lasted fifteen days, and then gave way to a profuse leucorrhœa. During the course of the hæmorrhage there were bearing-down efforts, accompanied by uterine pains, compared by the patient to those which follow labor for the expulsion of the placenta. The blood discharged was sometimes liquid, sometimes clotted. After this sanguineous discharge ceased, the abdomen, which had become very painful, especially on a line with the left iliac fossa, remained slightly tender and sensitive. The least pressure produced pain, which was also strongly marked in walking, so long as that motion was possible. There was never vomiting, but frequent nausea, with a slight diarrhœa during the hæmorrhage. Anorexia, thirst, and a well marked febrile excitement were constantly present. Some fresh hæmorrhages appearing at the close of December and the beginning of January, started up afresh all the symptoms, which had never wholly disappeared, and which returned again with increased severity about the 20th of June, this being the regular period for the return of the catamenia.

This group of symptoms agrees too perfectly with the data furnished us by our previous examination, for the diagnosis to remain any longer doubtful. According to the seat of the pain and the swelling, we were led to consider that it pointed to a disease of the internal organs of generation, the choice lying between a disease of the Fallopian tube and one of the ovary. The general condition, and especially the febrile symptoms, show us that the disease is of an inflammatory nature. Moreover, the menstrual disturbance is too great for us not to perceive that the ovary is interested. So then, with or without inflammation of the Fallopian tube, there is an inflammation of the ovary—an ovaritis—which, on account of the comparatively recent date (two months), must be called acute ovaritis.

Two principal causes—the one predisposing, the other exciting—have led, by most manifest influences, to the development of the disease in this case. The predisposing cause is the phthisical diathesis to which the patient, notwithstanding her apparently healthy condition, is subject. Its first manifestations, consisting in hemoptysis, cough and night sweats, have preceded by some weeks the advent of the ovaritis.

As to the exciting cause, its action is

not so evident, and it presents this remarkable feature, that it existed without producing any injurious effect on the health so long as the organism retained its natural powers of resistance; but it became at once hurtful when this power of resistance had been broken down by the invasion of phthisis. The predisposing cause in this case I have found to be the occupation of the patient, who is employed in working a sewing machine. Now, while I must say that I have seen women working with a sewing machine without its proving the least injurious—principally, however, those who do not confine themselves assiduously or constantly to that work—I have also ascertained some morbid effects which arise *from no other cause.* I remember two young women, sisters, who, in consequence of the prolonged use of the sewing machine, were made sick, the one with metritis, the other with a very rapid development of an ovarian tumor. In these two apparently dissimilar cases, two different diseases sprang from the same cause, which had produced in each a congested state of the inter-pelvic ovaries. It is in fact by the production of a permanent congested state of the generative system that the use of the sewing machine brings about the most injurious and most undeniable morbid effects.

This is proved by the fact that women who work sewing machines with only one pedal, do not experience any other effect than the fatigue resulting from their sitting for a long time in a constrained position. Of course chlorosis, with its various sequelæ, rachialgia, palpitation, &c., is common with women who are obliged to work these machines continuously; although diseases of the generative organs do not occur oftener in these cases than with those who follow any other sedative employment. It is well known that a sitting position is one of the causes of inflammation of the generative organs, since it favors a stasis of blood in the pelvic organs.

If, however, the machine with one pedal has no other inconvenience, and if perhaps it is perfectly harmless for a person who uses it occasionally, and then only for a short time, the case is not the same with the machine with two pedals. This last causes not only fatigue, but also a well-marked excitement of the generative organs, resulting from the friction and irritation of the vulva by the alternate movement of raising and dropping the legs. This titillation, which extends from the labia to the clitoris, and which lasts as long as the machine is in operation, causes a state of permanent erethism of the whole generative system.

The patient, of whom we are now speaking, is a case to the point, and she gives us information on this subject which excludes all chance of doubt; for sometimes she works with a single and sometimes with a double pedal, the latter being used for coarser and thicker materials. Now while the former does not produce any injurious effect, the latter always gives rise to the state of excitement to which I have alluded. I should add that she had used the double-pedal machine for eight or ten days just before the symptoms of acute ovaritis appeared from which she is now suffering.

In this particular case, the weakening or predisposing cause was phthisis; in another case it may be some other diathesis, or chlorosis, or a deficiency of nutrition, an unhealthy place of abode, or any other bad hygienic condition which weakens the patient. Among these causes we must not forget to mention the fatigues to which fashionable ladies are exposed by mingling in the dissipations of the times, and which may act both as a predisposing and exciting cause.

Does now this exciting cause act by producing an unusual congestion of the generative system, and consequently ovaritis? In this case the congestive excitement was produced by the mechanical action of a sewing machine, in other cases by a too great indulgence in the voluptuous pleasures of life. In other cases it is a physiological action, the effect of which may be exaggerated or disturbed by various causes. You well know that, at each menstrual period, a considerable determination of blood towards the ovaries takes place, which are congested and swollen at the moment when the Graafian vesicle bursts in order to allow the ovum, which has arrived at maturity, to escape. Imagine this physiological congestion carried a step further, and you have inflammation, of which the congestion was only the first stage. This explains why the advent of ovaritis is almost always to be traced to a menstrual period and not to a preceding delivery, the latter usually giving rise to metritis or other peri-uterine diseases; and why also ovaritis, although capable of showing itself during the whole of the period of sexual activity, is usually the disease of young girls or young married women. Finally, you will understand how any disturbance, occurring at the menstrual period, and especially how the sud-

den arrest of the catamenia, in consequence perhaps of some mental emotion or some exposure to cold, how any fatigue or injury, though slight, received during this period, may, by increasing the ovarian congestion, be occasionally the cause of ovaritis.

The inflammation of the ovary is so closely bound up with the physiological congestion of that organ that one never meets with a case of it occurring beyond the period of sexual activity—a period which begins with the first menstruation and which ends with the cessation of the catamenia—during which time a periodical congestion of the ovaries takes place. This explains why you do not see examples of ovaritis occurring in young girls before the age of puberty, or in old women who have passed the climacteric period of life.

The opportunities for a *post-mortem* examination of an inflamed ovary, except as it occurs during the course of puerperal fever, are rare, and it has so happened that those pathologists, who have accidentally come across this lesion, have always been ignorant of the symptoms observed during the life of the persons whose bodies they were examining. It is on these accounts that I am obliged to confess that between the symptoms and morbid lesions of ovaritis there exists a gap which has yet to be filled before the history of the disease is complete.

In place, therefore, of an anatomical picture, which I regret I cannot place before you, allow me to read the following account of an inflamed ovary which Dr. Scanzoni met in the body of a patient who had died of pneumonia, and which he thus describes :

"The autopsy showed in the pelvis, to the right of the uterus, a mass of coagulated fibrine of the size of the fist, easily separated from the adjacent organs, and evidently the result of an effusion. Removing this, we came upon the ovary, which had a longitudinal diameter of 2·16 inches, a transverse diameter of 1·57 inches and a thickness of about 1·37 inches. Its form was oval, and its size was considerably enlarged, as is shown by the measurements. Its surface was of a bluish-violet color, covered by numerous distended veins, and towards the interior angle of the posterior surface could be detected by its reddish-black color the spot where a Graafian vesicle had ruptured only a short time before. The consistency of the organ was soft, in some parts almost fluctuating. On cutting into it there escaped a considerable amount of blood, and the section presented the same violet color and also some greatly distended veins. The vesicle just alluded to, as showing so clearly where a rupture had recently taken place, was about the size of a pea. It still retained in its centre a small quantity of black liquid blood, while its sides were coated by a tolerably thick lining of fibrine. Two neighboring vesicles presented nearly the same measurements to the eye, and caused a slight protuberance on the surface of the ovary. On opening them, a fluid composed of blood and serum was pressed out. Towards the other extremity of the organ where the congestion was less marked, the section less red, and the consistency firmer, an abscess was discovered in the parenchyma itself, about the size of a bean, and containing pus mixed with blood. Behind this somewhat large abscess other smaller ones were discovered, whose size varied from that of a millet seed up to that of a small pea. These were situated deep in the parenchyma, and all contained more or less blood and pus. The entire tissue was infiltrated with serum, and most of the vesicles were perceptibly enlarged by a too copious accumulation of fluid.

"The pathological changes here found perfectly correspond to the picture which writers have drawn of acute ovaritis : considerable increase in the size of the organ, well marked congestion, traces of effusion in the vesicles, purulent points in the parenchyma and fibrinous exudations into the peritoneal covering of the organ."

You observe that here the alterations were three-fold, or, in other words, that they affected the three tissues which enter into the constitution of the ovary, namely, the vesicle, the parenchyma, and the outside covering.

Some writers have thought that, instead of invading these three tissues simultaneously, the inflammation might affect each of them separately, and they have attempted, with this idea in view, to describe three kinds of ovaritis which, according to their theories, might exist, viz., follicular, parenchymatous, and peritoneal. For my part, I very much doubt whether this is possible, and whether the inflammation can exist in one of the tissues without the others sympathizing ; unless, perhaps, with the exception of an inflammation of the serous envelope, which might certainly attack the surface of the ovary without penetrating to the depth of the parenchyma, but which would however spread with great violence

over a large expanse of peritoneum. A more practical division of the subject would be one which consisted in admitting, with the majority of pathologists, four degrees in the intensity of the inflammation of the ovary.

1st. *Congestion*, consisting of a simple enlargement with an increased vascularity of the organ.

2d. *Red Softening.* When the disease has reached this stage, the organ is larger than normal, and moreover infiltrated with serum, thus becoming friable, and in its interior we shall find one or more apoplectic spots.

3d. *Suppuration.* This stage embraces induration, increase of volume, and friability of tissue, as in the preceding case, with this difference, however, that the apoplectic spots are replaced by purulent points, which are usually to be found within the vesicles of which Négrier has cited many examples, but they may also occur in the parenchyma, as was mentioned in the case of Dr. Scanzoni, which I read to you.

4th. *Gray Softening, ending in Gangrene.* This condition is only met with in women who have died after delivery.

Of these four forms of inflammation of the ovary, we shall necessarily omit the last, since it belongs to a different disease from that which we are now considering—namely, to the ovaritis of puerperal fever. This statement is proved by the fact that it only occurs in those women who are attacked with ovaritis a short time after delivery, and it is never met with in those cases where ovarian disease has attacked a person under other circumstances.

As to the first form, or that of congestion. This state of the ovary is certainly a condition which has anatomically been verified, but always as a physiological condition in those women who have died a violent death during a menstrual period, and who, in every other particular, had been considered as enjoying the best of health. On the other hand, common sense admits certainly that, in the tissue of the ovary, as well as in all the other tissues of the body, congestion may be the first stage of inflammation; but in the case of the ovary a physiological congestion is often very closely connected in some way with a morbid one, so that it is absolutely impossible to say, looked at from an anatomical or clinical point of view, where the one ends and the other begins. From what has been said, then, it appears that, of these four degrees of ovarian inflammation, only two possess really any interest, and constitute, properly speaking, the pathological anatomy of ovaritis: these are the second, *red softening*; and the third, *suppuration* or *gray softening*. These two degrees represent, in the case of the ovary, two conditions exactly identical with those which in pneumonia are represented by the states known as red and gray hapatizations. Bear in mind that these two conditions are the only ones which are proved to exist, according to the researches of morbid anatomists, and which are often met with occurring simultaneously, as in the case of Dr. Scanzoni.

Pathological anatomy teaches us that the isolated inflammation of this organ is an exceedingly rare occurrence. Almost always the inflammation invades simultaneously all the neighboring parts, especially the Fallopian tubes, the pelvic peritoneum, and the peritoneal cellular tissue, more particularly that portion lying in the thickness of the broad ligaments. In these cases, however, we have to deal with a complex disease in which it is difficult to assign to each its part, while at present we have only to speak of ovaritis apart from all complications. Moreover, even in the most simple cases, the peritoneum is always affected, just as the pleura is always slightly inflamed in pneumonia; and it is rare that, when the ovary is inflamed, the Fallopian tube should escape. It is on this account that, even if I have been able already to convince you from certain symptoms that the patient, who has served thus far to illustrate these lectures, presented no complication of peritonitis or peri-uterine inflammation, still it was not possible to affirm that she did not have an inflammation of the Fallopian tube at the same time with the ovary, and I am therefore forced in this case to incline towards the belief in the existence of two inflammations, a fact which pathology shows is usually the case.

I shall now attempt to describe briefly the symptoms and progress of ovaritis.

The accession of the disease is, according to popular report, sudden, unexpected, acute, and the case rapidly assumes great severity; sometimes, however, it is slow, insidious, appearing like a simple malaise, followed, after a longer or shorter time, by the rapid development of the most alarming symptoms. This is true in the practice of those writers who, in their descriptions, embrace also the ovaritis of puerperal fever; for in this form of the disease alone do we see a sudden invasion of grave symptoms

causing the inflammation in a few hours to reach its height. In ordinary ovaritis the course of the disease is, on the contrary, marked by a group of symptoms which frequently pass unnoticed and do not attract the attention even of the patient until the moment when, becoming more unwell, she endeavors to ascertain the cause of the malady under which she is suffering. This is in fact one peculiarity which of itself seems to allow us to easily distinguish ovaritis from other peri-uterine diseases.

The first thing, which often attracts the attention of the patient, occurs during the catamenial period which is always disturbed by an attack of ovaritis. Very often there is metrorrhagia, but it is not rare to find amenorrhœa, or only an irregularity consisting in an alternation of menorrhagia and total suppression of the catemenia. At this very moment we have a young girl in the hospital who is affected by double ovaritis and who, after a suppression of the catamenia for some months, was attacked with metrorrhagia which was with difficulty arrested. In all these cases there is pain in the region of the ovary during the menstrual period. This dysmenorrhagic pain, so common with young girls, did not escape the notice of Aran, and, having noticed that it was present in those cases in which he so often observed the formation of clots in the interior of the ovarian vesicles, he was led to consider these clots and the yellow bodies which follow them as alterations dependent on ovarian inflammation. I do not know, as I have already told you, how we shall ever obtain an opportunity for an ocular demonstration of this; but I agree with him in this statement that ovaritis is more common with young girls than is generally believed, and I find the proof of this, not in the ovaries themselves, but, laying that organ aside, in the peritoneal plastic adhesions, which are so frequently shown us at autopsies, lying in the neighborhood of the ovaries and Fallopian tubes.

The pain which thus clearly marks the access of the disease, sometimes increases with the severity of the other symptoms, till it reaches with them a degree of intensity admitting no longer of any doubt as to the existince of a disease requiring immediate attention. This has been the course of events with our patient, in whom the attack of ovaritis may be considered as progressing somewhat rapidly.

Usually, however, the symptoms succeed one another more slowly. The pain, which was severe during the catamenial period, and which extended about the loins, is mitigated, without, however, entirely disappearing during the interval which follows the cessation of the catamenia. It was acute, it remains dull, at times lancinating, in other words it seems like a permanent feeling of uneasiness, with, however, an occasional sharp piercing exacerbation appearing especially as the result of any violent exercise or unusual fatigue. The patient continues pale, depressed, languid; a dark circle appears about the eyes; she suffers from an irregular febrile movement, especially marked towards evening. The appetite is wanting, or appears capricious. Her behavior is peculiar. She experiences an indescribable malaise which gives way to a fresh attack of pain at every menstrual period, only to leave her in the same languid, depressed state during the succeeding interval. At length the fever becomes more marked and the pain increases till it becomes insupportable. It has been said that the walls of the iliac fossa become the seat of an excessively painful tenderness, and that the walls are tense and swollen. In the case of the four patients in the hospital now suffering from this disease, you can see that this is not so. Though the iliac fossa is painful it is only so deep down, and then only after considerable pressure has been exerted over the region of the ovary. As for abdominal tension, there is none. You will scarcely find any resistance to palpation and only elevation of temperature such as is met with in metritis and peri-uterine inflammation. Vomiting has been curiously exaggerated as a symptom. If you occasionally meet with cases where there is profuse vomiting of a greenish-black or blackish substance, remember that this symptom belongs only to peritonitis, which always accompanies ovaritis and which may sometimes spread and indeed become the principal disease; this is a very rare occurrence, however, and you meet at the outset, during an attack of ovaritis, only a sympathetic nausea and vomiting, slightly persistent but consisting not of bile, but only alimentary substances or else mere glairy mucus.

The symptoms manifested in the neighboring organs, during an attack, are of slight importance, from the fact that the tumor, resulting from the inflammation, is of a slight size. The result is that it exercises but slight compression, sometimes on the rectum or bladder, sometimes on the branches of the sacral plexus, and, as a result, we find occasionally dysuria, constipation or diarrhœa, rectal or vesical tenesmus, or trouble in walking; yet all of these

are less marked, during the progress of ovaritis, than during any other of the peri-uterine inflammations.

The size of the tumor is so small that often it escapes the most careful examination. Scanzoni asserts that we cannot detect it through the abdominal or vaginal walls in those cases where a peritoneal false membrane of some thickness envelopes the inflamed ovary. I cannot entirely coincide in this opinion. In cases, for example, where the tumor is as large as Scanzoni himself has reported in the case which I just quoted, there would be no difficulty in recognizing the increase in the size of the ovary, even though it was covered with thick false membrane.

There is one reason why an inflamed ovary, although difficult of access, is yet more accessible to our touch than it is when in a perfect state of health, and this is because on account of its situation and weight it has a tendency to fall back from the body of the uterus and to draw also the latter with it, thus in reality giving rise to a retroversion. In the case of one of our patients, the uterus is retroverted to such a degree that the cervix is discovered directly behind the pubes, the body occupying the hollow of the sacrum. This falling of the inflamed ovary back towards the posterior peritoneal cul-de-sac, which is usually the rule in these cases, although there are many exceptions, was first noticed by Dr. Rigby, who has clearly pointed out that this displacement is owing to the increase in size and weight resulting from inflammation.

Although, on account of the excess of weight which it has gained, its tendency is to fall into the peritoneal cul-de-sac, yet its descent is arrested by the suspensory ligament which binds it to the uterus; and it even descends the less because the suspensory ligament, instead of stretching, seems to contract under the influence of the inflammation with which the ovary is attacked. Observe how this is brought about. The ovary in enlarging increases its volume excentrically, in accordance with its diameters; but the external extremity remains fixed at the point it already occupies. The result is that the internal extremity approaches the uterine cornua by insinuating itself into the thickness of the ovarian ligament, and thus the length of the latter is diminished. This phenomenon, which has been carefully observed and described by Aran, explains to us why the inflamed ovary, although it descends lower than the healthy ovary does, yet never falls into the floor of the posterior peritoneal cul-de-sac, which, you are aware, reaches very low down between the cervix and rectum, and why, instead of being able to touch some resisting body where it could lie, it constantly weighs upon the uterus, and by gradually tilting it further back at length drags that also down.

Tumors situated in the recto-vaginal wall, or at the base of the broad ligament, remain always fixed in the place they occupy, while tumors formed by the ovary itself often escape from under the finger which presses upon them. This peculiarity has for us a double value; first, because it allows us to recognize the fact that the tumor is situated within the peritoneum; and second, because it shows us that it is not kept in place by numerous and resisting adhesions. Sometimes, it is true, neither the vaginal nor rectal examination, nor even both combined, allow us to reach the inflamed ovary. In these cases it is necessary to have resort at the same time to external palpation, and, applying the open hand in the iliac fossa, to force back the organs of the true pelvis till they are brought in contact with the finger introduced into the vagina and rectum. We can then, by following the outline of the ovary, better understand it and better estimate the amount of tenderness of which it is the seat.

I must not fail to call your attention to the very marked predilection which the inflammation shows in favor of the left ovary. This is so great that, in the sum total of forty-three cases described in the writings of Dr. Chéreau, we find twenty-five were of the left ovary and only eleven of the right, while four were affected both at once, and in three cases the exact seat of the disease is not mentioned. In our four cases, this proportion is even greater, for in three cases the left ovary is attacked and in the remaining case both are diseased, that on the right having been first inflamed. Writers have endeavored to explain the frequency of this disease in the left ovary in comparison to that in the right by the compression which the sigmoid flexure of the colon exercises on the ovarian veins of that side, a compression rendered the more powerful when the intestines are habitually filled with fœcal matter, constipation being as a rule an accompanying symptom of ovaritis. But, if this is the case, then the constipation should cease to be considered as a symptom, and should be classed among the predisposing causes of the disease. Again, writers have alluded to the frequency of the left occipito-cotyloid position of the fœtus during pregnancy, and to the conse-

quent pressure which the head of the child must exert on the organs in the true pelvis; but, during gestation, the ovary is situated too high up not to escape from this compression, and moreover the frequency of ovaritis in the left side is as marked in young unmarried girls as it is in those who have had children.

(To be continued.)

CASE OF POISONING BY BELLADONNA.

By E. P. Hurd, M.D., Newburyport.

The following case of belladonna poisoning may be of interest to your readers, as illustrating the necessity of caution in using the alkaloid atropia, even within the prescribed limits.

On Saturday, May 28th, at 8½, A.M., I was called to see Mr. F., suffering from chronic sciatica. Patient very feeble; has been bed-ridden for some months. More than usual pain the previous night, and no sleep. I had been in the habit of using hypodermic injections of morphia, one fourth of a grain, as an anodyne. The usual disagreeable after-effects of opium ingestion invariably followed. I resolved on this ocsion to substitute atropia, taking a hint from a recent therapeutical work. Two nights before, I had injected about the fiftieth of a grain into the arm, and with, as I fancied, a decidedly calmative effect, although the patient was obliged to resort to a Dover's powder (10 grs.) during the night.

I prepared a solution of the following strength:—Atropia, gr. one seventh, ad aquæ ʒij.; *this making just seven syringefuls.* One syringeful (one forty-ninth gr.) was injected. On withdrawing the point of the syringe several drops of blood oozed forth, showing that I had penetrated a vein.

At 10 o'clock I was summoned in great haste. Mr. F. was in much distress. Face flushed, head hot, pupils dilated, delirium, restlessness, dry tongue and fauces, dysphagia, quick pulse, fever. He kept exclaiming, "O my back, my hips!" Family alarmed. My first procedure was to reassure the family. Morphia was administered. Ordered the mouth to be kept moist with lemonade; cold to the head, and sinapisms to the feet, which were cold.

Repeated visit at 2, P.M. Febrile reaction had subsided, and the condition was one of prostration. Pulse slow and feeble. Delirium rather of the low muttering character. Answers questions in monosyllables, and immediately relapses into the delirium. Picks at bedclothes, grasps at imaginary objects. Pupils large as pistol bullets; vision dim. Mouth parched. Says that he is in no pain. Restless. Feet and legs cold: the coldness extends to his hips. Head still hot.

Treatment.—Essence of beef every half hour. Carb. ammonia, with spts. lavender. Hot bottles to feet, and the entire lower extremities to be enveloped in warm flannels, over which a hot flat-iron to be assiduously applied.

4, P.M.—Patient has rallied. Temperature and pulse becoming natural. Less delirium. Has passed urine. Prescribed beef-tea and milk, the carb. ammonia to be occasionally administered.

Sunday, A.M.—Found my patient every way improved. Quite rational. Effects of the atropia nearly passed off. Pupils natural. Dim recollection of the events of the previous day; all seemed like a confused dream to him.

From the above experience of the effect of the internal administration of atropia, I judge that it is not always a safe or a reliable remedy. I could not have anticipated such unpleasant effects from so small a dose. Late authorities have given, hypodermically, as much as one twenty-fifth of a grain. I am not certain that one twenty-fifth of a grain would not have killed my patient!

It was stated, in the above report, that several drops of blood exuded on withdrawing the point of the syringe. Could I have thrown the solution into a vein, and could this account for the unpleasant toxic effects; the drug being carried directly, in the venous blood, to the heart and thence to the brain? This is the explanation of one of my *confrères* to whom I stated the case. It is certainly singular that the same dose on a former occasion should have affected my patient so slightly.

I am not disposed ever to repeat the same dose again. In fact, I intend to be careful in my use of atropia, in whatever way administered.

June 1st, 1870.

POISONING BY ACONITE. RECOVERY. PROBABLE ANTAGONISM BETWEEN OPIUM AND ACONITE.

By H. W. Brown, M.D., Hubbardston, Mich.

Mrs. M——, aged 31, was attacked with urethritis which, she stated, had recurred for the third time in about five years. In the treatment, I at one time prescribed tincture

of hyoscyamus (fol.), twenty-five drops every three hours, for the relief of pain.

Saw the patient at 8 o'clock, A.M., Feb. 11, 1870. She was reclining upon her bed, dressed, and reported having had a more comfortable night than she had done for several preceding. Upon a table, among others, was a vial containing about two drachms of fluid extract of aconite (rad.) (Parke & Duffield) which had been used as an external application for the relief of facial neuralgia. I gave my directions to the attendant for the day, and for the exhibition of the hyoscyamus and left the house, but fortunately remained upon the premises in conversation with the husband of the patient. In about half an hour, or a little more, I was summoned into the house by the announcement from the terrified nurse that the lady was dying. Found her "down stairs," in a rocking chair, with a *pallid* countenance, dilated pupil, cold extremities, extremely feeble and slow pulse, alternate relaxation and spasm of the muscular system, respiration very much retarded, subsultus tendinum, or rather wild movements of the arms and hands, and complaining at intervals (a word or two at a time) of intense thirst, severe burning pain in the stomach, vertigo, headache, dryness of the throat, &c.; said she could not swallow, or speak; that the room was quite dark; "I am so numb;" "I can't breathe," &c. I supposed the patient poisoned by belladonna, but was struck with the paleness of the face, and the presence of sensibility. I was about preparing an emetic, when the attendant stated that Mrs. M. had remarked, after taking the first dose of the "drops," that it felt dreadfully in her stomach, and she would not have it there, and had called for a table spoonful of mustard and some warm water, which she had mixed and drank. It did not, however, produce emesis. I administered an emetic, and a slight amount of fluid was evacuated by the mouth. I immediately commenced the exhibition of stimulants and sulphate of morphia, after the following plan. A mixture of two parts of whisky, and one part of water, to which a few drops of the spirits of camphor were added, was given, a teaspoonful every five minutes, or about that, and half a grain of sulphate of morphia every half hour. In addition, stimulant remedies (sinapisms) were applied externally. Free vomiting took place about eleven o'clock. At twelve, there was considerable improvement in the general condition of the patient. I then reduced the dose of the morphia, and gave it at longer intervals. I think there was a manifest improvement after the third dose. Now to state the main point. It appeared, upon examination, that the attendant had given the patient twenty-five drops of fluid extract of aconite, instead of hyoscyamus as directed, by mistake or carelessness, as both vials were plainly marked, and the proper one indicated.

Would twenty-five drops be considered a poisonous dose? The dose is from two to five drops ordinarily. There is doubt in my mind that in this case the termination would have been fatal without treatment. I remained with the patient till six, P.M.; it was two or three days before recovery was complete. The free evacuations of the stomach contributed, doubtless, in a great measure to the recovery, even though it occurred so late.

I am also convinced of the efficacy of the morphia in the case. There is some discussion at the present time as to whether there is an antagonism between opium and belladonna. If so, why not between opium and aconite?

Selected Papers.

ON REDUPLICATION OF HEART SOUNDS.

By Archibald Bleloch, M.A. Glasg., Sc. D., Edin.

The nervous supply of the heart is threefold. There are the cardiac branches of the pneumogastric, the sympathetic plexuses appropriated to the supply of the heart, and a system of ganglia in the substance of the organ itself. The function of the cardiac branches of the pneumogastric has been demonstrated to be inhibitory. The function of the sympathetic cardiac nerves is at once motor and sensory. The function of the ganglia in the substance of the organ is supposed to be connected with rhythm and co-ordination.

This extensive nervous supply corresponds with the mechanism of the organ otherwise. The heart is made up of muscular tissue, exactly similar to that of voluntary muscle, and hence it possesses, when healthy, very high contractile power. In addition to this, it is lined by a delicate serous membrane, in contact with which is the warm vital fluid, the blood. The serous lining is supplied with sensory nerves, which must be supposed to communicate with the ganglia in the heart itself, with the sympathetic and spinal nerve centres, and also as furnishing all requisite information

for the regulation of the inhibitory action of the pneumogastrics. Now, all irregular action of the heart, palpitations, reduplication of sounds, anæmic murmurs, and such like dynamic conditions, must be referred to some defect in one or other or to several of these elements, which, combined in healthy relationship, make up normal cardiac actions.

It is said that an anæmic state of the blood is the cause of what is termed dynamical murmur and palpitation, but with more reason, this condition of the heart is referred to ischæmia of the cardiac nerve centres, coincident with, or superinduced by the general anæmia. Again, there may be fatty degenerations of the substance of the heart, in which case the contractibility of the muscular structure is impaired, and the vis nervosa, although daily eliminated from the cardiac nerve centres, and conveyed along the nerve tubes to the heart, finds no adequate response, and ultimately no response at all; in which case the patient dies of syncope: not that the cardiac nerve centres are at fault, but the degeneration of the muscular tissue of the organ has reached a point beyond which contractibility is not excited. Syncope from shock is caused by the non-transmission of the vis nervosa. The shock destroys, or rather suspends the eliminating power of the nerve centre.

Again, when there is evidence that the two halves of the heart do not act in concert, or when we have a reduplication of the second sound or four sounds instead of two, our attention is directed to the inhibitory and senso-motory nervous apparatus of the heart, rather than to the muscular structure of the organ, or the condition of the blood which it propels. The heart is a double organ, and like all such organs, its two halves are supplied by the nerves appropriate to the opposite sides of the body. No doubt we have cardiac plexuses formed by branches from both pneumogastrics, and from both cords of the sympathetic; and it is reasonable to suppose that these plexuses are arranged by nature to secure the simultaneous action of the two halves of the heart; just as the pulmonary plexuses are arranged to secure the simultaneous action of the two lungs. The nature of a plexus, however, we take to be not so much a crossing of nerve tubes from right to left and from left to right, as a simple intercommunication whereby the vis nervosa for either half the double organ is maintained at a common standard, just as if two rivers from different sources, but running parallel, had intercommunications which kept them always at the same level. And as when some of these intercommunications are stopped, one of the rivers might overflow its banks while the other was below its ordinary level, so with the vis nervosa transmitted to the opposite sides of the heart. If we suppose the intercommunications established by the cardiac plexuses have become impaired, or inefficient from any cause, the simultaneous action of the two halves of the heart will be rendered uncertain or destroyed. A reduplication of the sounds would occur whenever the vis nervosa on the two sides became unequal.

There is another explanation possible. It has been ascertained by experiment, that the vis nervosa, or nerve energy in man, travels at the rate of 200 feet in a second. It travels at this rate when the nerve tube is in a state of health. If from any cause the nerve tube becomes a less efficient conveyer of vis nervosa, the rate of transmission will be diminished, and a consequent retardation of muscular contraction will result. That such a thing is possible is evident from the fact, that in the frog vis nervosa travels at a slower rate than in man. It travels at the rate of 90 feet in a second, not because vis nervosa is different in the frog from what it is in man, but because the means of transit is less efficient.

A neurosis is a functional derangement of the nerve tissues. While neurosis lasts the nerve centre affected, or the nerve tube affected, does not discharge its function efficiently, that is, it does not discharge its function according to the normal type of nerve tissue in man. There is a retrogression, for the time being, to a lower type of nerve tissue. Both the rate of transmission and the quantity of vis nervosa transmitted, may be less. Now, this neurosis, or functional derangement, is either in the sensory or motor cardiac nerves, and on one or the other side, or on both. When the neurosis exists in the sensory cardiac nerves on one side, the intimation that a sufficient quantity of blood has arrived in the auricles or ventricles, will not be conveyed with equal speed to the motor centres on that side; and the motor vis nervosa will arrive later on the same side. This will be repeated each time, so long as the neurosis continues; the instant of the transmission of the sensory impression being always the same on both sides, because the retarded contractions on the one side necessitate a retarded expansion on the other, auricle for auri-

cle, and ventricle for ventricle. No contraction of the auricles takes place till both auricles are filled; no contraction of the ventricles takes place till both ventricles are filled. The sound side of the heart contracts always first, but invariably waits till its tardy companion comes up for a fresh start. The race is lost and won, and again begun on equal terms continuously.—*Dublin Medical Press and Circular.*

Medical and Surgical Journal.

Boston: Thursday, July 21, 1870.

TETANUS.

At the Société Impériale de Chirurgie, the subject of tetanus was introduced by M. Verneuil, who reported a case of traumatic origin which had recovered under the use of chloral. M. Brown-Séquard was invited to give his views upon that subject. He does not consider it the result of poisoning, as Bilroth thinks, nor a species of septicæmia, which Despres advocates. He agrees with Verneuil that it is the consequence of the increase of the reflex faculty of the cord, due to a peripheric excitation or irritation.

To the objection that chorea, epilepsy, hysteria, &c., may be caused by wounds which at another time give rise to tetanus, and that these different affections cannot be caused by the same increase of reflex faculty of the cord, he replies that this function exists in parts of the cord which differ essentially one from the other; hence it is not surprising that the increase of this faculty in different parts of the cord should produce different phenomena.

Another objection arises from the fact that the phenomena of tetanus appear in one case and not in another. To this, Brown-Séquard replies that a similar variation of results is seen on exposure to cold. One person experiences no injurious effect, another has laryngitis, another tracheitis or bronchitis, others a disease of the lungs, the heart, the intestines, the bladder, the eyes, the ears, &c. We must admit that there is a peculiar individual predisposition which causes the effects of one and the same cause to vary.

It is not then astonishing that in some persons deep contused wounds and serious injuries do not give rise to tetanus; while in others superficial wounds, even wounds already cicatrized, may cause tetanic, epileptic, hysterical or choreic convulsions, and nervous diseases generally.

However, the etiology of tetanus shows that it cannot be considered the result of poisoning.

Spontaneous or idiopathic tetanus, which so often occurs in warm countries, from the influence of exposure to a current of cold air while perspiring, does not have any connection with poisoning. The circumstances in which the disease occurs, and the rapidity of its development, exclude such an idea.

In those cases of tetanus which follow contused wounds, very frequently the disease commences by local phenomena, by the contraction of the muscles in the neighborhood of the wound, by spasm of the masseters, or *trismus*; it is only later that the morbid phenomena extend to the muscles of the neck, the trunk and limbs.

This is not the case in poisoning by the drugs which cause convulsions; the convulsions under these circumstances are universal and synchronous.

The records of medicine contain a great many cases in which the wounding of a nerve, cautery, pricking, contusion, compression, inflammation, &c., complicate the wound, and thus it becomes an evident cause of tetanus. In other cases, tetanus manifests itself after exposing a wound to the action of a current of cold air. Here, again, the irritation of the nerves of the part have been the cause of tetanus without any toxic influence.

Statistics show that complicated wounds of nerves, more or less severe in character, are especially the cause of tetanus. This disease, then, is the result of an irritation of the peripheral nerves, causing an increase of the reflex function of the spinal cord.

If it is objected to this that painless and cicatrized wounds have been followed by tetanus; it is easy to reply that reflex phe-

nomena can be excited by special irritations, even if not painful. Every one knows, for example, that the presence of worms in the intestines very frequently causes convulsive attacks, without any sensation of pain. When, in an epileptic animal, the skin is forcibly pinched in the *epileptic zone*, the epileptic attack does not occur; it takes place if one only tickles the skin or irritates it superficially. We must, then, admit the existence of nervous filaments designed particularly to excite reflex action, and of separate nervous filaments whose function is to transmit impressions of pain.

It is necessary to remark, in the wounds followed by tetanus, that the sensibility to pain diminishes in proportion as the reflex action increases. In certain wounds, unimportant in character and not painful, we notice also a great tendency to reflex phenomena after slight excitement of the wounded surface.

The attentive observation of the progress and development of tetanus is in opposition to the theory of poisoning. Tetanus has occurred a quarter of an hour after an abrasion of the finger by a bit of porcelain. In two cases after wounds, tetanus appeared at the end of eleven or twelve hours. In some cases the patients have recovered after section of the nerve of the injured part.

The symptomatology of tetanus is also opposed to the doctrine of poisoning. We notice that the contractions are limited to certain groups of muscles, in the neighborhood of the wound or in the parts of the body in which it occurs; in the muscles of the anterior part of the body, for instance (emprosthotonos), when the wound is situated in that part. In a great number of cases we have seen the phenomena commence in the part injured, and remain more intense in this part of the body than in the remainder. In other cases the contraction is limited to the half of the body on the side with the wound.

In short, in the greater number of tetanic cases, we notice when the wound is touched convulsive movements limited to the wounded portion if the excitement is trivial, extended to half the body when the excitement is stronger, and to the whole body under still greater irritation. In a case of tetanus produced by a wound of the back, the wound, although painless, could not be touched without exciting general contractions. Such effects are incompatible with the doctrine of poisoning.

Pathological anatomy, which shows congestion of the cord, also furnishes an argument against the theory of poisoning, as otherwise we must admit that in tetanus a toxical agent is generated with properties analogous to those of strychnia; but in cases of strychnine poisoning, in a short time the reflex faculty of the whole of the cord and medulla is increased. In traumatic tetanus, however, the congestion is limited to certain parts of the cord, which corresponds with the symptoms. This is all opposed to the toxic theory, and is in accordance with the reflex origin of the disease.

To the objection that the nervous lesion does not exist in a sufficient number of cases, it may be replied that it has not always been sought. Experience shows that though exempt from alteration in one part of its tract, the nerve is visibly altered at other points. But material alterations are not necessary to justify the theory. Who has ever seen any vital property whatever? The increase of a vital property, sensibility, reflex activity, &c., may very well exist without visible material alteration.

Finally, the *treatment* of tetanus shows that it is not of toxic origin. The effects of poisons do not yield to multiple medication; toxical agents have antidotes, tetanus has none. The cases in which tetanus has been cured by section of a nerve or by amputation of a limb show the influence of peripheric nervous irritation in its production.

THE CHANNING HOME.

From the report of this very worthy charity, for the year ending April 1, 1870, we learn that during that time its ministrations have been continued to the utmost extent that the capacity of the Home would permit. During the year, 13 new patients have been admitted, 6 have died, and 16 have been discharged well or much relieved.

It must be remembered that this is not a hospital, in the common acceptation of

the word, but a home for incurables, for those whose early death seems quite certain, or those who will probably live for a long time, but need constant medical attendance. Two results follow from this: one that the number of deaths is proportionally larger, the other that some of the patients remain for many years. This is the only institution in the city where this principle has been so long and so persistently carried out, and it constitutes one of its peculiar claims to support.

In the early part of the year, the Trustees purchased, for the use of the Home, the estate No. 8 McLean street, and have fitted it up for their use. The institution is thus in possession of a larger and more appropriate house, and with increased facilities for air, light and more agreeable surroundings.

The officers for the current year are Dr. Samuel A. Green, President; Theodore Metcalf, Treasurer; Charles P. Curtis, Secretary. The medical staff consists of Drs. Munroe, Hayden and Tuck.

Uterine Inertia overcome by Manual Distention of the Perinæum. By Dr. Van der Meersch.—The distention of the perinæum, by the pressure of the child's head, excited by reflex action, increases uterine contractions, a fact which all accoucheurs have verified. The application of the forceps, by the distention of the vulva and the perinæum which it causes, always gives the same result. Dr. Van der Meersch, having had his attention called to these facts, has employed, for some years, and with great advantage, a method which brings about the same result. When, toward the end of labor, the pains begin to grow feeble and at last to disappear entirely, whether the membranes are broken or not, the cervix more or less obliterated, he excites them anew by introducing the right index and middle fingers as far as the head of the child; then separating the fingers to the distance of four or five centimetres, he applies the tips to the recto-vaginal wall against which the head should be pressing, and then draws them gradually toward the external orifice, pressing against the wall so as to exercise a decided distention of the perinæum. Repeated several times successively, especially at the period of a pain, this little manœuvre brings about rapid and effective contractions, in place of infrequent and feeble ones.—*L' Union Médicale*, 14 May.

The method of Dr. Van der Meersch is not unknown among us, but has been employed by accoucheurs in Boston for many years.

A writer in *L' Union Médicale* suggests the employment of iodoform as a dressing in cases of syphilitic rupia, phagedenic chancres, varicose ulcers, plaques muqueuses and fissure of the anus. The drug is sprinkled on the surface, and covered by gold beater's skin or cotton spread with cerate. It is left on for four or five days without being renewed. M. Demarquay has used iodoform, united with cocoa butter, in dressing the ulceration of cancer. He employs it, in this case, as a local anæsthetic and detergent.

Remarkable Case of Insatiable Appetite.—Perhaps the most extraordinary instance, says *Nature*, of excessive and depraved appetite on record is that of a French soldier, named Tarare, whose case is described in vol. xxi. of the *Dictionnaire des Sciences Médicales*, by Dr. Percy. He was born near Lyons, and came up to Paris, where his first exploit was to eat a basket of apples—at a friend's expense. On various occasions he swallowed a series of corks and other indigestible materials, which produced such violent colic that he was obliged to attend the Hôtel Dieu, and whilst being examined almost managed to swallow the watch-chain and seals of the surgeon in attendance, M. Giraud. Desault, on the occasion of one of these attacks of colic, tried to frighten him out of his gross habits by declaring that it would be necessary to open his stomach, and arranged the instruments; he ran away and relieved himself by copious draughts of warm water. Soon after he found that his appetite had really increased to an excessive amount, probably owing to the continued irritation produced by these absurd tricks. At 17 years of age, when only weighing 100 lbs., he could eat 24 lbs. of beef in as many hours. He now entered the army, and being recognized by the Surgeon-Major, M. Courville of the 9th regiment of Hussars, he was detained for the sake of curiosity. From the day of his admission, he was ordered quadruple rations, with pickings and waste meat,

but often slipped into the dispensary to finish off a poultice or two. One day he was observed to seize a large cat, and after sucking its blood, left, in a very short time, only cleanly picked bones, the hair being ejected in the course of about half an hour, like other carnivora. He was fond of serpents and eels, swallowing them whole. On another occasion he consumed in a few minutes a repast, spread out for fifteen German work-people, of milk, &c., after which he was blown out like a balloon. In the presence of some officers he swallowed, at one sitting, 30 lbs. of liver and lights. His insatiable appetite was for once in his life made useful, by his being selected to convey a correspondence between General Beauharnais and a French colonel, which was inserted in a box and swallowed; but he was caught and soundly thrashed. He fell under suspicion of having eaten a child fourteen months old. It is stated that he was of mild and gentle manners and aspect. After death his stomach was found in a very diseased condition.—*Dublin Medical Press and Circular.*

Physiology of the Blood.—In a recent paper by M. Savotti, in the *Centralblatt*, he describes a phenomenon of great interest, and hitherto unobserved—the entrance of entire pigment-cells into the channels of the capillaries and smaller veins of the web of the frog's foot through their walls. This is the converse process to that exit of white corpuscles of the blood through the walls of the blood-vessels, which has attracted much attention, and as to which the researches have been brought under the notice of our readers. M. Savotti uses a dilute solution of sulphuric acid—2 per cent. The cells contract and become aggregated around the minute vessels. Then, putting forth processes, one pierces the wall of the vessel and enters its cavity. The whole cell sometimes is drawn in, and after remaining adherent for a time to the vessel, gradually moves onward with the current of blood. The observation is one of great physiological interest. It will of course require verification.—*British Med. Journal.*

A Modification of the Operation for Artificial Pupil.—M. Liebreich has just presented to the *Académie des Sciences* an instrument which he has devised for the purpose of modifying the shape of the artificial pupil more surely, and more in accordance with the demands of each individual case than hitherto. It depends on the application of a mechanical principle, which has not as yet been utilized in surgery, and consists of a forceps whose handles do not open in the ordinary manner, but which revolve on a longitudinal axis in such a way that their rotation both opens and closes their curved extremities. Introduced into the anterior chamber by a narrow incision through the cornea, the forceps may be widely opened without the part of the instrument engaged in the wound sharing in the motion in the slightest degree. Consequently this forceps can be introduced in any given direction, whereas the instrument hitherto employed could not deviate from the radial direction.—*The Medical Record.*

Nitrate of Amyl.—A correspondent of the New York *Medical Gazette* says: Guthrie, who investigated the properties of the nitrate of amyl after the discovery of it by Balard, proposed it as a resuscitative in drowning, suffocation and protracted fainting. It would seem worthy of a trial in the threatened syncope from chloroform; since the inhalation of but a few drops is followed by marked acceleration of the heart and flushing of the face. The writer poured about eight drops upon a towel, and, as an experiment, snuffed it two or three times, when immediately the radial pulse became accelerated, the heart throbbed with much force, and the pulsation of the cranial vessels became almost painful. At the same time there was a decided tingling of the ears. The symptoms lasted but a few moments, the tingling remaining after the circulation had become quiet.

In his Inaugural Lecture to the course of Pathological Anatomy in King's College, Professor Lionel S. Beale thus sums up the essentials of reform in medical education: "Good general examinations year after year during the period of studentship, conducted by examiners appointed for limited periods, whose knowledge has been acquired within a quarter of a century of the period when they examine, is really all that seems to be required. If this were established, all registration formalities and compulsory attendance might be swept away, for the student would soon find out for himself how he could most efficiently study the various subjects of which he would be compelled to show that he possessed a competent knowledge."—*N. Y. Med. Gazette.*

Medical Miscellany.

MR. EDITOR,—In an article published July 14, in your JOURNAL, Dr. Mettauer states "that he has witnessed a vast number of scrofulous enlargements of the parotids in the course of his professional life." He speaks of one instance in which "the parotids had attained the bulk of a large man's fist, and very nearly filled the spaces between the clavicles and inferior maxillary bone on each side." I think the profession would be interested in hearing from Dr. Mettauer a fuller account of his observations upon the "scrofulous disease of the parotids."

Respectfully yours, A. B. C.

BUST OF HARVEY.—Mr. Horatio Stone has recently finished, at his studio in New York, a colossal bust of Harvey, the discoverer of the circulation of the blood, and a sketch model for a colossal statue, from the portrait by Domenichino, which it is in contemplation to complete and erect in the Central Park. They have been on exhibition at the artist's studio, where they have been seen by large numbers of the profession.

DR. NEUMANN, of Vienna, in the *Archiv fur Dermatologie und Syphilis*, states that carbolic acid, when injected under the skin, acts three times more quickly than when taken into the stomach. He employs it to arrest the germination of the lower vegetable organisms, in solutions of one part in 300 or 500.

POISONING BY ARNICA FLOWERS.—Dr. A. Schumann, of Dresden, relates the case of a woman who, for suppressed menstruation, drank an infusion of a handful of arnica flowers. After half an hour she was taken with violent vomiting and severe congestion, in a few hours with intense pain in the stomach and intestines, when after nine or ten hours collapse set in. On the third day the pains returned, and, together with intercurrent diarrhœa, continued for eight days longer, notwithstanding suitable treatment.—*Schmidt's Jahrbucher.*

ICHTHYOSIS.—Mr. George Naylor says that local means are of great service in the treatment of ichthyosis. Glycerine, in the proportion of six or eight ounces to thirty gallons of water, at a temperature of 96°, is a useful bath, and twice or thrice a week, or, as this is costly, after using a common warm bath, the whole surface may be spread with a quart of warm water containing two ounces of glycerine; or, lastly, glycerine alone after a bath. When scales are very thick, rub them off with pumice stone. Internally, iron combined with aperients.—*Dublin Medical Press and Circular.*

BARON LIEBIG.—We regret to learn that, succeeding his severe indisposition from nervous headache and carbuncle on the neck, from which he was recovering, Baron Liebig has been attacked with anthrax. Although his medical advisers hope that his excellent constitution will enable M. Liebig to overcome this new malady, nevertheless his case is regarded with alarm, especially as he is 67 years of age.—*Ibid.*

OIL OF SANDAL-WOOD IN BLENNORRHAGIA.—Dr. Park, of Stanmore, England, states that after twelve years' experience with the oil of yellow sandal-wood, he is convinced that it is the safest and most reliable drug we possess for the cure of blennorrhagia. He administers five-minim doses every four hours.—*Practitioner.*

DR. M'NAB recommends the local application of carbolic acid ointment in psoriasis, one part of the acid to four of common lard.

TO CORRESPONDENTS.—Communication accepted:—Temporary Blindness following an attack of Intermittent Fever.

CORRECTION.—In the Editorial on page 27, line 22, in our last issue, for "but" read *or*.

DIED,—In Louisville, Ky., July 19, Dr. Powell, for forty years a leading physician of that city, aged 68.

PAMPHETS RECEIVED.—De L'Œsophagotomie Externe. Par L. Felix Terrier. Paris. 1870.—A Medico-Legal Study of the Case of Daniel McFarland. By Wm. A. Hammond, M.D., New York. Pp. 36.—The Bromides; their Physiological Effects and Therapeutic Uses. By Z. C. McElroy, M.D., Zanesville, Ohio. Pp. 26.—First Annual Report of the New York Ophthalmic and Aural Institute, for the year ending April 30, 1870, with the Act of Incorporation and By-Laws. Pp. 16.—Transactions of the New York Academy of Medicine. Vol. III. Part 9. Pp. 32.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending July 16, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases — Consumption.	Prevalent Diseases — Cholera Infantum.
Boston	139	28	18
Charlestown	6	3	0
Worcester	20	3	5
Lowell	25	3	6
Milford	8	2	1
Cambridge	11	0	2
Salem	6	1	0
Lawrence	11	2	4
Springfield	12	2	4
Lynn	6	1	1
Gloucester	6	1	0
Fitchburg	2	0	1
Newburyport	4	0	0
Somerville	5	1	0
Fall River	9	3	0
Haverhill	7	2	0
	277	52.	42

From all the above-named places there were reported seventeen deaths from dysentery and diarrhœa, eight from scarlet fever, six from typhoid fever and five from measles.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending July 16th, 139. Males 61—Females 78.—Accident, 3—apoplexy, 2—congestion of the brain, 1—disease of the brain, 5—inflammation of the brain, 1—bronchitis, 6—cancer, 1—cholera infantum, 18—consumption, 28—convulsions, 3—debility, 3—diarrhœa, 8—diphtheria, 1—dropsy, 1—dropsy of the brain, 6—drowned, 1—dysentery, 4—scarlet fever, 6—typhoid fever, 2—hæmorrhage, 2—disease of the heart, 3—disease of the kidneys, 3—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 2—measles, 1—old age, 3—paralysis, 2—pleurisy, 1—premature birth, 2—puerperal disease, 1—rheumatism, 2—suicide, 1—teething, 2—tumor, 2—unknown, 7—whooping cough, 1.

Under 5 years of age, 70—between 5 and 20 years, 14—between 20 and 40 years, 21—between 40 and 60 years, 16—above 60 years, 13. Born in the United States, 94—Ireland, 28—other places, 17.